

Land, Water and People

In Nature, Change Happens

By Mike Blakeman

Intuitively, we know that the landscape is always changing. We, of course, enjoy the usual seasonal changes and we may notice a tree has fallen across our favorite trail or a new beaver dam has been built across a creek. Even with this understanding, it seems many of us believe the larger landscape will stay pretty much unaltered.

After 2002, and then again in 2006, many residents of the San Luis Valley started realizing that occasional larger hiccups of change may occur due to forest fires. But, even the seemingly large Million and Mato Vega fires only burned 24,000 acres of the over 2 million acres of the forested lands that surround the SLV.

The forest is currently undergoing an even larger change as the spruce bark beetle continues to spread and kill our locally most abundant tree, the Engelmann spruce. Tens of thousands of acres have been infested in the San Juan Mountains. In some areas every spruce larger than 5 inches in diameter has been infested.

In this part of Colorado, Engelmann spruce typically grows with subalpine fir between 9,500 to 12,000 feet in elevation (with some variation due to soil moisture). Approximately 45% of the Rio Grande National Forest falls in this zone with about 31% of the Forest actually covered by spruce/fir forest.

Spruce beetles are always living in our forests, but usually at very low populations. The beetles typically attack older stressed trees or trees that have recently blown down. Sometimes large areas blow down providing an abundance of food, which allows the beetle populations to mushroom. They then spread into the surrounding forest and overwhelm healthy spruce. This kind of dynamic has happened somewhat frequently including in the 1980s in the Crystal Lakes area south of Del Norte. The Forest Service was able to control this infestation by harvesting the beetle-ridden trees.

Periodically, conditions occur that lead to much larger epidemics than what we saw at Crystal Lakes and that is what we are experiencing now. There has been little disturbance in much of our spruce/fir forest for a long time, so there are many thousands of acres of crowded large trees. Then, in the year 2000, things started drying out. The drought put a lot of stress on the trees and they were not able to adequately defend themselves against the bark beetles. Soon the beetle populations reached a critical mass and there was no way to stop them.

Some would put the blame of our current epidemic on fire suppression, but that probably isn't the case. In this part of Colorado, naturally occurring large fires in the spruce/fir zone are rare due to all the rain and snow this elevation receives. During periods of drought, there often isn't an ignition source – we don't get a lot of dry lightning around here. This has led some foresters to believe that large bark beetle epidemics are THE major type of large disturbance in the spruce/fir zone.

There's not a lot the Forest Service can do about the spruce beetle epidemic. We will harvest beetle-killed trees in areas where it is appropriate, but in most areas, we will let nature run its course. Many of the dead trees will continue standing for decades as a new forest grows up below. As the large trees fall, they will provide habitat for a variety of small mammals and will slowly decompose putting nutrients and organic matter back into the soil.

This is the way spruce/fir forests work, so rather than mourn the deaths of so many beautiful spruce trees, maybe we should try to watch with wonder this natural event that only occurs every 200 to 300 years.

Mike Blakeman is the public affairs officer for the San Luis Valley Public Lands Center. He spends much of his free time scrambling around the mountains with a camera in his hand.